

Report for 2002KS1B: High Plains Aquifer Information Network

There are no reported publications resulting from this project.

Report Follows:

HiPLAIN – The High Plains Aquifer Information Network

www.hiplain.org

Principal Investigators

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Statement of Problem

The High Plains aquifer spans nearly 111 million acres of the Great Plains. Many communities and agricultural producers rely on the aquifer for groundwater to thrive in the semi-arid region. Uses of the aquifer include municipal, industrial, recreational, and intense agricultural production. Understanding the importance of the aquifer and ensuring its viability in the future is critical.

One key to understanding the High Plains aquifer is to have an effective method of sharing information that is practical and applicable to all users of the aquifer. Residential and agricultural users, researchers, consultants, and public policy makers need to have a common source of information to help them acquire the information and knowledge they need to protect this vital resource.

Research Objectives

The Internet is an effective method of disseminating data and information. The High Plains Aquifer Information Network (HiPLAIN) establishes an informational site to serve all users of the High Plains aquifer. HiPLAIN focuses on providing information on many aquifer-based issues, including education, agriculture, environmental topics, technical data, and links to organizations that are associated with the aquifer.

HiPLAIN is a one-stop source for a broad group of High Plains aquifer users. By consolidating the available information into one website, individuals are able to find answers and utilize resources with a click of their mouse. HiPLAIN will provide opportunities for Kansans and other potential users to increase their understanding of the state's water resources and provide information to enable better personal and public decisions on water conservation, development, and management.

Methodology

HiPLAIN was developed in 2002/03 to be a central location for High Plains aquifer resources. During the summer of 2002, the main sections of the website were determined to be *About the Aquifer*, *Education*, *Organizations*, *Environment*, *Technical*, *Agriculture*, *Pictures*, *Maps*, *More about HiPLAIN*, and a *Search the Site* utility for finding information quickly.

After the main topics were determined, construction of the site began. An important consideration during the site's development was to make the layout simple and user-friendly. To achieve this, it was decided that the site would have a static menu bar (Fig. 1) on the left portion of the screen, giving the web-user the option to quickly navigate between the different sections. The static menu bar also lends a feeling of familiarity and uniformity between the numerous pages of the website. The homepage of the website (Fig. 2) features an aerial image of Western Kansas irrigated farmland, a welcome message, a text menu bar featuring the website's sections, and a search-engine input box for quick access to information. The user can quickly search for resources and information of interest.



Figure 1. The Static Menu Bar

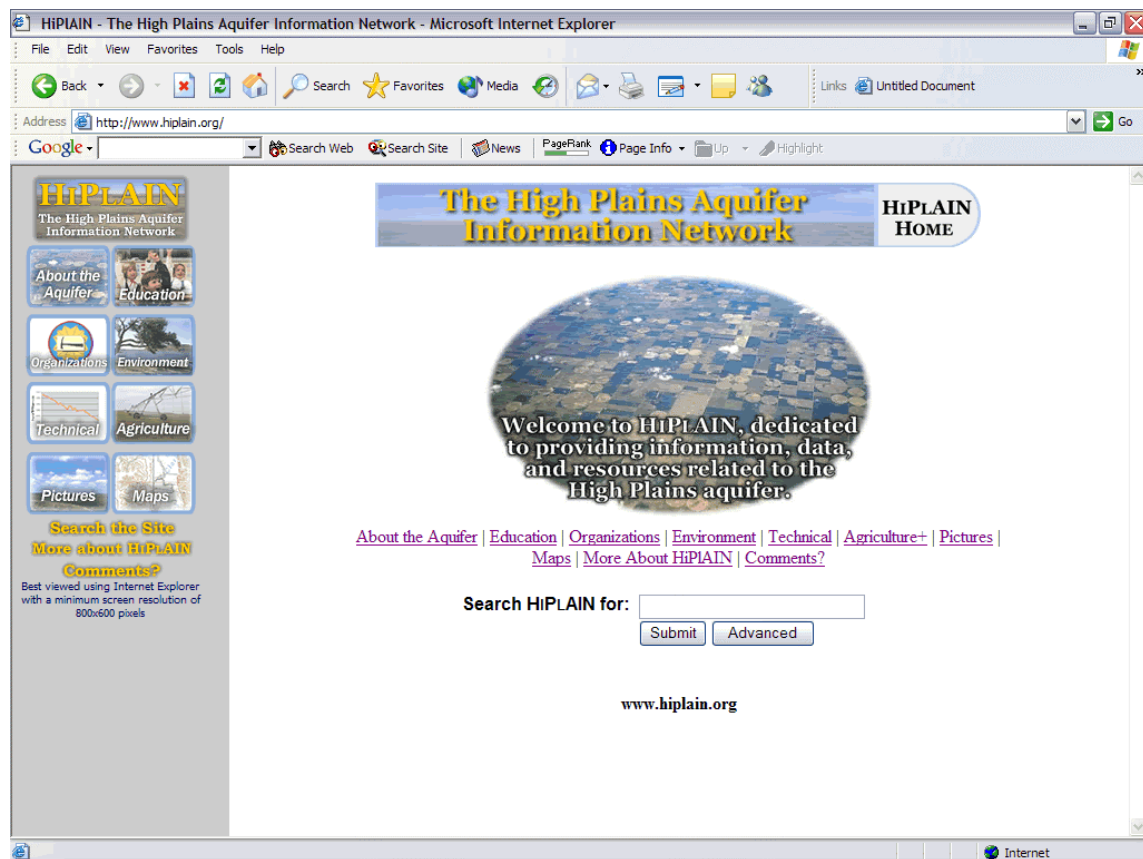


Figure 2. The HiPLAIN Home Page

The **About the Aquifer** section highlights general information about the High Plains aquifer and the environmental and usage factors that affect it. Subcategories include *Interesting Facts*, *Aquifer Characteristics*, *Water Resource Issues by Region*, *Water Budgets and the Hydrologic/Water Cycle*, *Water Rights/Water Use/Water Management/Water Level Declines*, *Water Quality*, *The Future?*, and *Bibliography*.

The **Education** section takes a classroom-style approach to educating about the High Plains aquifer. Education subcategories are geared towards individuals wanting to learn more about the aquifer or to teach others and include: *Groundwater Basics*, *Resources for Teachers and Students*, *For Kids*, *Search Engines*, *Advanced*, and *Glossaries*.

The **Organizations** section features links to many organizations that deal with water and the environment. Organizations subcategories are *Kansas General Links*, *Academic/Educational/Research*, *Planning/Policy/Legislation*, *Regulatory/Management/Water Rights*, *Environmental/Conservation*, *Drinking Water/Municipal Water Use*, and *Agricultural/Rural Development*.

The **Environment** section provides access to detailed weather related information, environmental and conservation websites, and links dealing with the environmental issues we are facing today. Environment subcategories include *Climate and Weather*, *Environmental/Conservation Organizations and Information*, and *Environmental Issues*.

The ***Technical*** section gives users links to scientific information concerning the High Plains aquifer. Users who desire to view or download data or learn more about water models will find these links very useful. Technical subcategories include *Data and Tools, Geographic Information Systems and Remote Sensing, Research, Online Reports, and Models*.

The ***Agriculture*** section focuses on how agriculture and livestock production benefit from the aquifer and their effect on it. Agriculture subcategories include *Commodity Associations, Irrigation, Soils, Crops, Livestock, Agribusiness and Industry, Regulatory Agencies and Information, Agricultural Information and Resources, Sustainability, Federal Agencies and Programs, and Energy*.

The ***Pictures*** section provides links to photographs and photo galleries related to the High Plains aquifer. Many of the photos are provided through the Kansas Geologic Survey Photo Display System. Users may see the many aspects of the High Plains aquifer through the photos listed.

The ***Maps*** section features links to maps associated with the hydrogeology, water use, and water quality of the High Plains aquifer, both for Kansas and regionally, as well as related spatial data.

The ***Search the Site*** section presents users with an input box to enter keywords that will search the HIPLAIN site and find the relevant information. Search results are presented in order of relevance and can be sorted by date.

Once the website's design and layout were determined, the domain name **www.hiplain.org** was acquired by the Kansas Geological Survey (KGS). The site is currently being hosted by KGS.

Principal Findings

The HIPLAIN website was officially unveiled during the *Water and the Future of Kansas* conference in Manhattan, Kansas, on March 11, 2003. Since then the site has received a great deal of positive feedback and compliments. The site has also benefited from the addition of several links that were suggested by individuals reviewing the HIPLAIN website.

Significance

As the project moves into its second year, several enhancements are being planned. Keeping with the idea of increasing user-friendliness, a new menu bar is being designed that will incorporate drop-down menus, allowing users to find their section of interest with fewer clicks of their mouse. To reduce the length of the pages, each subcategory of

the main sections will have a dedicated page, with links back to the main topics or subcategories. This style of website will improve visibility of search engines and increase the overall utility of the site.

In addition to providing and improving easy access to Kansas High Plains aquifer information, second-year plans include further acquisition and development of links with all eight High Plains states concerning water policies and issues, socioeconomic issues, technical information, and access to available datasets for use by the public. HIPLAIN developers will work closely with the Ogallala Aquifer Institute (OAI) to form working relationships with the other states and to permit web access to available online data sets. The HIPLAIN and OAI groups are working together to develop an OAI web site that will be hosted and maintained by KGS.